



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0689; Directorate Identifier 2009-SW-065-AD]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft-Manufactured Model S-64F

Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede an existing airworthiness directive (AD) for the Sikorsky Aircraft Corporation-manufactured Model S-64F helicopters, now under the Erickson Air-Crane Incorporated (Erickson) Model S-64F type certificate. That AD currently requires inspections, rework, and replacement, if necessary, of the main gearbox (MGB) second stage lower planetary plate (plate). Since we issued that AD, the manufacturer has conducted a configuration review and analysis, and a review of the service history of certain components. The proposed actions are intended to establish life limits for certain components, remove various parts from service, and require consistency in the part numbers of certain four bladed tail rotor (T/R) assemblies to prevent fatigue cracking, failure from static overload, and subsequent loss of control of the helicopter.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 days AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.

- Fax: 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

EXAMINING THE AD DOCKET: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, any comments received and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed AD, contact Erickson Air-Crane Incorporated, ATTN: Chris Erickson / Compliance Officer, 3100 Willow Springs Rd, PO Box 3247, Central Point, OR 97502, telephone (541) 664-5544, fax (541) 664-2312, e-mail address cerickson@ericksonaircrane.com. You may review a copy of this service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137.

FOR FURTHER INFORMATION CONTACT: Michael Kohner, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Rotorcraft Certification Office, Fort Worth, Texas, 76137, telephone (817) 222-5170, e-mail 7-avs-asw-170@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

Discussion

On May 9, 1997, we issued AD 97-10-15, Amendment 39-10028 (62 FR 28321, May 23, 1997), for the Sikorsky Aircraft-manufactured Model S-64F helicopters (now under the Erickson Model S-64F helicopter type certificate) with a plate, P/N 6435-

20516-101, with 2,000 or more hours time-in-service (TIS). That AD requires, before the first flight of each day, inspecting the MGB main oil filter for magnesium contamination, and if magnesium contamination is present, replacing the MGB assembly. That AD also requires inspecting the MGB assembly within 100 hours TIS, and thereafter at intervals not to exceed 500 hours TIS, and if necessary, replacing the MGB assembly. Finally, that AD requires, at the next overhaul of the MGB assembly, inspecting and reworking the plate. That action was prompted by two incidents in which the plate was found cracked. The requirements of that AD are intended to prevent failure of the plate due to fatigue cracking, which could lead to failure of the MGB and subsequent loss of control of the helicopter.

Actions Since Existing AD Was Issued

Since we issued AD 97-10-15, Erickson has performed additional analysis as a part of a configuration review and has also reviewed the service history of certain components. Erickson determined that certain life-limits and other maintenance requirements need to be revised, and released Erickson Service Bulletin (SB) No. 64F General-1, Revision 17, dated August 17, 2010 (SB No. 64F General-1, Rev. 17). We have reviewed this SB and have determined that the retirement lives of certain parts need to be revised. We have also determined that certain parts, including the plate, P/N 6435-20516-101, which is the subject of the existing AD, should be removed from service and should no longer be eligible for installation on these helicopters.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Related Service Information

SB No. 64F General-1, Rev. 17, contains the Airworthiness Limitations Schedule for the Model S-64F helicopter and lists the parts and assemblies with their specified retirement lives.

Proposed AD Requirements

This AD proposes to reduce or establish the life limits for certain flight-critical components, remove other parts with service difficulties from service, and require that T/R blade assembly P/N 65160-00001-048 be installed only as a set of four and not be installed with another part-numbered blade. The requirements in current AD 97-10-15 would be superseded and the part-numbered planetary plate, which is the subject of that AD, would be removed from service. This proposed AD would require, before further flight, a change in the life-limit for the following components:

- Main Rotor (M/R) Blade Assembly, P/N 6415-20601-045;
- Main Transmission Support Beam Assembly, LH, P/N 6420-62363-045;
- Main Transmission Support Beam Assembly, RH, P/N 6420-62363-046;
- Left Splice Fitting (Transition Fitting), Rotary, Rudder Boom, P/N 6420-66341-101;
- Right Splice Fitting (Transition Fitting), Rotary, Rudder Boom, P/N 6420-66341-102;

- M/R Drive Shaft, P/N 6435-20536-101;
- Pressure Plate Assembly, Rotary Wing Head, P/N 65101-11016-042;
- Horn and Liner Assembly, P/N 65102-11047-041;
- Lower Hub Plate Assembly, P/N 65103-11009-041;
- Horizontal Hinge Pin, Rotary Wing Head, P/N 65103-11020-103;
- Damper Bracket Assembly, Rotary Wing Head, P/N 65103-11032-043;
- Hub Subassembly, Rotary Wing, P/N 65103-11310-043;
- Shaft Assembly, Pitch Control Tail Gearbox, P/N 65358-07035-043; and
- Rod End Assembly, Primary Servo Assembly, P/N 65652-11212-041.

In addition to proposing new or revised life limits for certain flight-critical components, this AD also proposes to remove the following components from service due to service difficulties:

- Spindle Assembly, Rotary Rudder, P/N 6410-30302-041;
- MGB Second Stage Lower Planetary Plate, P/N 6435-20516-101 or 6435-20516-102;
- Bracket Assembly, Main Servo, P/N 6435-20527-041 or 6435-20527-042;
- Primary Servo Link Assembly, Tandem Servo, M/R, P/N 6465-62161-042;
- Shoulder Bolt, T/R, P/N 65111-07001-102; and
- T/R Blade Assembly, P/N 65161-00001-041.

This proposed AD contains only a portion of the life-limited parts for this model helicopter, and is not an all-inclusive list.

Costs of Compliance

We estimate that this proposed AD would affect 7 helicopters of U.S. Registry and estimate, at an average labor rate of \$85 per hour, the following costs for removing from service the parts listed in Table 2 of this proposed AD action:

- Reviewing helicopter records to determine if an affected part is installed will require approximately 2 work-hours, for a cost per helicopter of \$170 and a fleet cost of \$1,190.
- Replacing the rotary rudder spindle assembly will require 10 work-hours and a parts cost of \$2,787, for a cost per helicopter of \$3,637 and a fleet cost of \$25,459.
- Replacing the plate will require 40 work-hours and a parts cost of \$43,750, for a cost per helicopter of \$47,150 and a fleet cost of \$330,050.
- Replacing the main servo bracket assembly will require 2 work-hours and a parts cost of \$5,223, for a cost per helicopter of \$5,393 and a fleet cost of \$37,751.
- Replacing the primary servo link assembly of the M/R tandem servo will require 10 work-hours and a parts cost of \$14,533, for a cost per helicopter of \$15,383 and a fleet cost of \$107,681.
- Replacing the T/R shoulder bolt will require 10 work-hours and a parts cost of \$571, for a cost per helicopter of \$1,421 and a fleet cost of \$9,947.
- Replacing the T/R Blade Assembly will require 8 work-hours and a parts cost of \$125,765 for a cost per helicopter of \$126,445 and a fleet cost of \$885,115.
- The total cost to replace the parts that are proposed to be removed from service is estimated to be \$199,599 per helicopter and a fleet cost of \$1,397,193.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Amendment 39-10028 (62 FR 28321, May 23, 1997), and adding the following new AD:

ERICKSON AIR-CRANE INCORPORATED: Docket No. FAA-2012-0689;
Directorate Identifier 2009-SW-065-AD.

(a) Applicability.

This AD applies to Sikorsky Aircraft Corporation-manufactured Model S-64F helicopters, now under the Erickson Air-Crane Incorporated Model S-64F type certificate, certificated in any category.

(b) Unsafe Condition.

This AD defines the unsafe condition as a fatigue crack in a flight critical component. This condition could result in component failure from static overload and subsequent loss of control of the helicopter.

(c) Other Affected ADs.

This AD supersedes AD 97-10-15, Amendment 39-10028 (62 FR 28321, May 23, 1997).

(d) Compliance.

You are responsible for performing each action required by this AD within the specified compliance time unless accomplished previously.

(e) Required Actions.

(1) Before further flight:

(i) Remove from service any part with a number of hours time-in-service (TIS) equal to or greater than the part's retirement life as stated in following Table 1 of this AD.

Table 1 - Parts with New or Revised Life Limits

Part Name	Part Number (P/N)	Retirement Life
Main Rotor (M/R) Blade Assembly	6415-20601-045	13,280 hours TIS
Main Transmission Support Beam Assembly, LH	6420-62363-045	9,300 hours TIS
Main Transmission Support Beam Assembly, RH	6420-62363-046	9,300 hours TIS
Left Splice Fitting (Transition Fitting), Rotary, Rudder Boom	6420-66341-101	8,300 hours TIS
Right Splice Fitting (Transition Fitting), Rotary, Rudder Boom	6420-66341-102	8,300 hours TIS
M/R Drive Shaft	6435-20536-101	2,200 hours TIS
Pressure Plate Assembly, Rotary Wing Head	65101-11016-042	8,800 hours TIS
Horn and Liner Assembly	65102-11047-041	1,140 hours TIS

Part Name	Part Number (P/N)	Retirement Life
Lower Hub Plate Assembly	65103-11009-041	15,500 hours TIS
Horizontal Hinge Pin, Rotary Wing Head	65103-11020-103	5,100 hours TIS
Damper Bracket Assembly, Rotary Wing Head	65103-11032-043	20,000 hours TIS
Hub Subassembly, Rotary Wing	65103-11310-043	21,600 hours TIS
Shaft Assembly, Pitch Control Tail Gearbox	65358-07035-043	9,400 hours TIS
Rod End Assembly, Primary Servo Assembly	65652-11212-041	20,800 hours TIS

Note to Table 1: The list of parts in Table 1 of this AD contains only a portion of the life-limited parts for this model helicopter and is not an all-inclusive list.

(ii) Revise the retirement life of each part as shown in Table 1 of this AD by making pen and ink changes or by inserting a copy of this AD into the Airworthiness Limitations section of the maintenance manual.

(iii) Record on the component history card or equivalent record the retirement life for each part as shown in Table 1 of this AD.

(2) Before further flight, remove from service any part with a P/N listed in the following Table 2 of this AD, regardless of the part's TIS. The P/Ns listed in Table 2 of this AD are not eligible for installation on any helicopter.

Table 2 - Parts to be Removed from Service

Part Name	P/N
Spindle Assembly, Rotary Rudder	6410-30302-041
Main Gearbox Second Stage Lower Planetary Plate	6435-20516-101 or 6435-20516-102
Bracket Assembly, Main Servo	6435-20527-041 or 6435-20527-042
Primary Servo Link, Tandem Servo, M/R	6465-62161-042
Shoulder Bolt, Tail Rotor (T/R)	65111-07001-102
T/R Blade Assembly	65161-00001-041

(3) Before further flight, if a T/R blade assembly, P/N 65160-00001-048, is installed, remove any of the other three T/R blade assemblies that have a different P/N and replace it with a T/R blade assembly, P/N 65160-00001-048. The T/R blade assembly, P/N 65160-00001-048, must be installed in sets of four only.

(f) Alternative Methods of Compliance (AMOCs).

(1) The Manager, Rotorcraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Michael Kohner, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Rotorcraft Certification Office, Fort Worth, Texas, 76137, telephone (817) 222-5170, e-mail 7-avs-asw-170@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(g) Additional Information.

Erickson Service Bulletin No. 64F General-1, Revision 17, dated August 17, 2010, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Erickson Air-Crane Incorporated, ATTN: Chris Erickson / Compliance Officer, 3100 Willow Springs Rd, PO Box 3247, Central Point, OR 97502, telephone (541) 664-5544, fax (541) 664-2312, e-mail address cerickson@ericksonaircrane.com. You may review a copy of this information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(h) Subject.

Joint Aircraft Service Component (JASC) Code: 6300: Main Rotor Drive System
and 6400: Tail Rotor System.

Issued in Fort Worth, Texas, on June 21, 2012.

M. Monica Merritt,

Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.

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